

WSDOT Fish Passage Barriers Invented as of March 2006

Site Id	WSDOT District	Road	Mile Post	Stream	Tributary to	WRIA	Feature Type	Fishway attached to the Feature	% Fish Pass	Significant Reach (>=200 m)	PI	Culvert No.	Shape	Material	Span (m)	Rise (m)	Length (m)	Bed Material Present	Water Surface Difference Drop (m)	Slope	Road Fill Depth (m)
990873	Eastern	I-90	198.83	Unnamed	E Low Canal	41	Culvert	No	0	No		1.1 RND		SFS	1.83	1.83	76.20	Unk	0.98	4.00	
990874	Eastern	I-90	202.53	Unnamed	E Low Canal	41	Culvert	No	0	No		1.1 RND		SFS	1.83	1.83	91.44	Unk	0.88	3.00	
997545	Eastern	I-90	279.09	Garden Springs Cr	Hangman Cr	56.0005	Culvert	No	0	Yes		1.1 BOX		CPC	1.22	0.91	102.44	No	0.00	2.54	5.00
997546	Eastern	I-90 Off Rd	278.00	Garden Springs Cr	Hangman Cr	56.0005	Culvert	No	33	Yes		1.1 RND		CST	0.91	0.91	27.58	No	0.00	2.60	1.00
997547	Eastern	I-90 Off Rd	278.00	Garden Springs Cr	Hangman Cr	56.0005	Culvert	No	33	Yes		1.1 RND		PCC	0.46	0.46	17.30	No	0.06	1.85	1.50
990226	Eastern	SR 194	1.20	Little Alnora Cr	Snake R	35.1018	Culvert	No	0	Yes	6.29	1.1 RND		CST	0.91	0.91	42.67	Unk	1.31	4.00	
990473	Eastern	SR 195	93.39	Marshall Cr	Hangman Cr	56.0008	Culvert	No	0	Yes	9.57	1.1 BOX		CPC	1.91	1.91	63.60	No	1.39	1.40	5.00
992122	Eastern	SR 20	361.47	Unnamed	Keogh Lk	59	Culvert	No	67	Yes		1.1 RND		CAL	0.60	0.60	32.52	Yes	0.00	2.92	0.40
990303	Eastern	SR 20	363.73	Narcisse Cr	Lk Pend Oreille	59.0252	Culvert	No	0	Yes		2.2 RND		CST	0.77	0.77	16.10	No	0.23	1.80	0.60
990303	Eastern	SR 20	363.73	Narcisse Cr	Lk Pend Oreille	59.0252	Culvert	No	0	Yes		1.2 RND		PCC	0.96	0.96	15.80	No	0.00	1.38	0.60
990881	Eastern	SR 20	380.10	Unnamed	Lk Thomas	59	Culvert	No	33	Yes		1.1 SQSH		CST	1.45	0.95	25.90	No	0.00	4.17	1.00
990350	Eastern	SR 20	388.13	Renshaw Cr	Pend Oreille R	62.0310	Culvert	No	33	No		1.2 RND		CST	0.90	0.90	22.09	No	0.00	3.90	2.00
990350	Eastern	SR 20	388.13	Renshaw Cr	Pend Oreille R	62.0310	Culvert	No	33	No		2.2 RND		CST	0.90	0.90	22.29	No	0.00	3.90	2.00
990351	Eastern	SR 20	389.50	Renshaw Cr	Pend Oreille R	62.0310	Culvert	Yes	0	Yes		1.1 SQSH		CST	1.92	1.40	23.70	No	0.00	2.00	
990351	Eastern	SR 20	403.60	Reynolds Cr	Pend Oreille R	62.0408	Culvert	No	0	Yes	2.65	1.1 RND		PCC	0.76	0.76	43.47	No	0.27	3.01	2.00
990280	Eastern	SR 21	115.50	Meadow Cr	Sauvill R	52	Culvert	No	0	Unknown		1.1 BOX		PCC	1.83	1.83		Unk	6.10		
990204	Eastern	SR 21	117.05	Jack Cr	Sauvill R	52	Culvert	No	0	Yes	3.13	1.1 BOX		PCC	1.22	1.22		Unk	1.83		
990140	Eastern	SR 21	120.10	Empire Cr	Sauvill R	52	Culvert	No	0	Yes	3.78	1.1 BOX		PCC	1.22	0.91	27.43	Unk	1.25	2.50	
990056	Eastern	SR 21	123.60	Cache Cr	Sauvill R	52	Culvert	No	67	Unknown		1.1 BOX		PCC	0.91	1.22		Unk	0.30		
990013	Eastern	SR 21	139.40	Anderson Cr	Sauvill R	52	Culvert	No	0	Yes	3.58	1.1 BOX		PCC	1.22	2.44		Unk			
990399	Eastern	SR 21	175.20	St Peter's Cr	Curlew Cr	60	Culvert	No	0	Yes	3.31	1.1 RND		CST	1.07	1.07	21.34	Unk	0.38	3.00	
990372	Eastern	SR 23	52.30	Sheep Cr	Upper Crab Cr	43.0832	Culvert	No	0	Yes	3.99	1.1 BOX		PCC	2.29	3.05	35.97	Unk	0.00	5.00	
991683	Eastern	SR 231	36.10	Unnamed	Spring Cr	54.0108A	Culvert	No	0	No		1.1 BOX		PCC	1.22	1.83	16.15	Unk	0.55	2.50	
991470	Eastern	SR 25	33.50	Unnamed	O-Ra-Pak-En Cr	58	Culvert	No	0	No		1.1 RND		CST	0.91	0.91	36.38	Unk	0.40	2.50	
990007	Eastern	SR 25	37.60	Alder Cr	Lk Roosevelt	58.0134	Culvert	No	0	Yes	6.61	1.1 BOX		PCC	1.52	1.83	20.42	Unk	0.00	6.00	
990198	Eastern	SR 25	42.37	Hunters Cr	Lk Roosevelt	58.0146	Culvert	No	0	Yes	4.87	1.1 BOX		PCC	1.68	3.96	27.13	Unk	0.00	2.50	
990343	Eastern	SR 25	84.60	Pingston Cr	Columbia R	61.0007	Culvert	No	67	Unknown		1.1 BOX		PCC	1.22	1.22	3.05	Unk	0.00	7.00	
995837	Eastern	SR 270	4.29	Unnamed	Paradise Cr	34	Culvert	No	67	Yes		1.1 BOX		CPC	1.30	1.85	25.49	No	0.00	1.40	2.50
990201	Eastern	SR 31	3.80	Ione Millpond	Pend Oreille R	62.0279	Culvert	No	0	Yes	11.73	1.1 BOX		PCC	2.13	2.44	25.91	Unk	0.00		
990416	Eastern	SR 31	10.70	Sweet Cr	Pend Oreille R	62.0224	Culvert	No	0	Yes	3.17	1.1 BOX		PCC	2.29	2.59	19.51	Unk	0.00		
997535	Eastern	SR 31	12.98	Linton Cr	Pend Oreille R	62.0214	Culvert	No	0	Yes		1.1 RND		PCC	1.22	1.22	44.44	No	0.35	3.65	11.25
991471	Eastern	SR 31	18.23	Three Mile Cr	Pend Oreille R	62.0051	Culvert	No	33	Yes		1.1 RND		PCC	0.46	0.46	13.40	No	0.00	2.80	1.50
997541	Eastern	SR 31	24.34	Lime Cr	Pend Oreille R	62.0014	Culvert	No	33	Yes		1.1 RND		PCC	0.91	0.91	13.53	No	0.00	1.85	1.00
997543	Eastern	US 195	95.77	Garden Springs Cr	Hangman Cr	56.0005	Culvert	No	33	Yes		1.2 RND		CST	0.91	0.91	75.90	No	0.00	7.50	9.00
997543	Eastern	US 195	95.77	Garden Springs Cr	Hangman Cr	56.0005	Culvert	No	33	Yes		2.2 RND		CST	0.91	0.91	76.19	No	0.00	7.50	9.00
997498	Eastern	US 2	296.35	Deadman Cr	Little Spokane R	55.0051	Culvert	No	33	Yes		1.1 BOX		CPC	2.44	2.44	58.66	No	0.00	0.48	16.00
990113	Eastern	US 2	304.40	Deer Cr	Little Spokane R	55.0380	Culvert	Yes	33	Yes		1.1 BOX		PCC	2.13	2.74		No			
990125	Eastern	US 395	174.95	Dragon Cr	Little Spokane R	55.0163	Culvert	No	33	Yes		2.2 BOX		CPC	3.05	3.66	43.08	No	0.00	-0.18	6.00
990125	Eastern	US 395	174.95	Dragon Cr	Little Spokane R	55.0163	Culvert	No	33	Yes		1.2 BOX		CPC	3.05	3.66	43.08	No	0.00	-0.18	6.00
991001	Eastern	US 395	183.72	Unnamed	Beaver Cr	55.0298	Culvert	No	33	Yes		1.1 RND		PCC	1.22	1.22	29.91	No	0.00	1.90	2.00
990157	Eastern	US 395	204.79	Frauzwa Cr	Colville R	59.0687	Culvert	No	33	Yes		1.1 RND		PCC	0.91	0.91	31.04	No	0.00	1.90	1.00
990573	Eastern	US 395	212.80	Unnamed	Colville R	59	Culvert	No	0	Yes	2.91	1.1 RND		PCC	0.76	0.76	50.29	Unk	0.79		
990106	Eastern	US 395	247.70	Deadman Cr	Kettle R	60.0008	Culvert	No	0	Yes	11.48	1.1 BOX		PCC	1.52	2.13	45.72	Unk		11.00	

Appendix I - Eastern

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5/24/2006

## WSDOT Fish Passage Barriers Inventoried as of March 2006

Site Id	WSDOT District	Road	Mile Post	Stream	Tributary to	WRIA	Feature Type	Fishway attached to the Feature	% Fish Pass	Significant Reach (>=200 m)	PI	Culvert No.	Shape	Material	Span (m)	Rise (m)	Length (m)	Bed Material Present	Water Surface Difference Drop (m)	Slope	Road Fill Depth (m)
990267	Eastern	US 395	249.90	Matsen Cr	Kettle R	60.0056	Culvert	No	33	Yes	2.76	1.1	RND	PCC	1.22	1.22	30.48	Unk	0.00	5.00	
990124	Eastern	US 395	250.20	Doyle Cr	Kettle R Arm	60.0060	Culvert	No	0	Unknown		1.1	RND	PCC	1.22	1.22	21.34	Unk	0.00	12.00	
997532	Eastern	US195	94.90	Unnamed	Hangman Cr	56.0006	Culvert	No	67	No		1.1	ELL	SPS	2.29	2.51	101.55	No	0.00	1.16	4.00

There are 1538 WSDOT barrier features inventoried as of March 2006. The number of records in this spreadsheet exceeds 1538 due to the existence of multiple pipes at some crossings, referred in this appendix as Culvert Numbers (see explanation below).

<sup>1</sup> The culvert number identifies individual culverts at multiple stream crossings. Format X.Y, where X = specific culvert number, and Y = total number of culvert at a crossing. For example, in a triple culvert crossing, the first pipe would be 1.3, the second 2.3, and the third 3.3.

## Culvert Material

PCC - precast concrete  
 CST - corrugated steel  
 SST - smooth steel  
 CAL - Corrugated aluminum  
 SPS - structural plate steel  
 PVC - plastic  
 TMB - timber  
 MRY - masonry  
 OTH - other  
 SPA - structural plate aluminum  
 CPC - cast in place concrete

## Culvert Shape:

ARCH - bottomless arch  
 SQSH - squash  
 RND - round  
 BOX - rectangular  
 ELL - ellipse  
 OTH - other